UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/576,038	05/23/2000	Mark Sean Hefty	219.38022X00	4371

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EXAMINER
NGUYEN, THANH T

ART UNIT	PAPER NUMBER
2144	

DATE MAILED: 08/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/576,038	HEFTY ET AL.
	Examiner	Art Unit	
	Tammy T. Nguyen	2144	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *(3)* MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 May 2006* .

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *32-55* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *32-55* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____ .

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)	4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) ☐ Notice of Informal Patent Application (PTO-152)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .	6) ☐ Other: .

UNITED STATES PATENT AND TRADEMARK OFFICE

Detailed Office Action

1. This action is responsive to the amendment filed on May 22, 2006.

2. Claims 32-55 are pending.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 32-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beshai et

al., (hereinafter Beshai) U.S. Patent No. 6,721,271 in view of Phil Edholm., (hereinafter

Edholm) U.S. Patent No. 6,600,721.

5. As to claim 32, Beshai discloses the invention substantially as claimed, Beshai teaches

including a method comprising: if an amount of data located in a first memory buffer

does not exceed a maximum transfer capacity [see col.12, lines 26-40 (the number

segments in the buffer equal or exceeds the parcel size)] of a system in which the data is

to be transferred associating the data with a first transfer operation (see col.14, line 65 to col.15, line 28); and if the amount of data associated with the first transfer operation has not reached the maximum transfer capacity, associating: data located in one or more portions of one or more other memory buffers with the first transfer operation (see col.18, lines 9-35). However, Beshai does not explicitly teach data is to be transferred in a single transfer operation to a remote memory buffer.

6. In the same field of endeavor, Edholm discloses (e.g., end node pacing for QOS and bandwidth management). Edholm discloses data is to be transferred in a single transfer operation to a remote memory buffer [see Edholm col.4, lines 4-15 (transfer the packet to a memory buffer)].

7. Accordingly, It would have been obvious to one of ordinary skill in the networking art at the time of the invention was made to have incorporated Edholm's teaching of end node pacing for QOS and bandwidth management with the teaching of Beshai for the purpose of provide to increase the complexity and expense of the network system [see Edholm col.1, lines 45-50]. Thus, Beshai provides the motivation by stating providing for transfer to be simpler, and therefore faster and easier to scale up [see Beshai, col.4, lines 39-40].

8. As to claim 33, Beshai teaches the invention as claimed, additionally comprising transferring the data associated with the first transfer operation (see abstract).

9. As to claim 34, Beshai teaches the invention as claimed, additionally comprising associating a descriptor with the first transfer operation (see col. 10, lines 48-65).

10. As to claim 35, Beshai teaches the invention as claimed, additionally comprising associating data with one or more subsequent transfer operations (see col. 17, lines 18-51).

11. As to claim 36, Beshai teaches the invention as claimed, wherein the first and one or more subsequent transfer operations are performed in response to one or more RDMA (Remote Direct Memory Access) requests (see fig.16 memory 0).

12. As to claim 37, Beshai teaches the invention as claimed, additionally comprising: if the amount of data located in the first memory buffer exceeds the maximum transfer Opacity: associating a portion of the data with the first transfer operation: and associating one or more subsequent portions of the data with one or more subsequent transfer operations (see col.17, lines1-67).

13. As to claim 38, Beshai teaches the invention as claimed, additionally comprising: associating a descriptor with the first transfer operation; and transferring the data associated with the first transfer operation (see abstract).

14. As to claim 39, Beshai teaches the invention as claimed, additionally comprising: associating a descriptor with each of the one or more subsequent transfer operations; and transferring the data associated with the one or more subsequent transfer operations (see col.17, lines 1-67).

15. As to claim 40, Beshai discloses the invention substantially as claimed, Beshai teaches teach including an apparatus comprising: an RDMA (remote direct memory access) manager operable to service one or more RDMA requests (see Fig.1), and to: determine if an amount of data looted in a first memory buffer exceeds a maximum transfer capacity

[see col.12, lines 26-40 (the number segments in the buffer equal or exceeds the parcel

size)] of a system in which the data is to be transferred, and: if it is determined that the

amount of data located in a first memory buffer does not exceed the maximum transfer

capacity [see col.12, lines 26-40 (the number segments in the buffer equal or exceeds the

parcel size)], then associate the data with a first transfer operation (see col.14, line 65 to

col.15, line 28); and if the amount of data an associated with the first transfer operation

has not reached the maximum transfer capacity, associate data located in one or more

portions of one or more other memory buffers with the first transfer operation (see col.18,

lines 9-35). However, Beshai does not explicitly teach data is to be transferred in a single

transfer operation to a remote memory buffer.

16. In the same field of endeavor, Edholm discloses (e.g., end node pacing for QOS and

bandwidth management). Edholm discloses data is to be transferred in a single transfer

operation to a remote memory buffer [see Edholm col.4, lines 4-15 (transfer the packet to

a memory buffer)].

17. Accordingly, It would have been obvious to one of ordinary skill in the networking art at

the time of the invention was made to have incorporated Edholm's teaching of end node

pacing for QOS and bandwidth management with the teaching of Beshai for the purpose

of provide to increase the complexity and expense of the network system [see Edholm

col.1, lines 45-50]. Thus, Beshai provides the motivation by stating providing for transfer

to be simpler, and therefore faster and easier to scale up [see Beshai, col.4, lines 39-40].

18. As to claim 41, Beshai teaches the invention as claimed, the RDMA manager additionally

operable to transfer the data associated with the first transfer operation (see abstract).

19. As to claim 42, Beshai teaches the invention as claimed, the RDMA manager additionally operable to associate data with one or more subsequent transfer operations (see col.17, lines 1-67).

20. As to claim 43, Beshai teaches the invention as claimed, the RDMA manager additionally operable to: determine if the amount of data located in the first memory buffer exceeds the maximum transfer capacity, and: if the amount of data located in the first memory buffer exceeds the maximum transfer capacity: associate a portion of the data with the first transfer operation; and associate one or more subsequent, portions of the data with one or more subsequent transfer operations (see fig.17).

21. Claim 48 has similar limitations as claim 32; therefore, it is rejected under the same rationale.

22. Claim 53 has similar limitations as claim 43; therefore, it is rejected under the same rationale.

23. Claims 49-52 have similar limitations as claims 33-36; therefore, they are rejected under the same rationale.

24. Claims 54, and 55 have similar limitations as claims 38, and 39; therefore, hey are rejected under the same rationale.

25. Claims 44-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beshai et al., (hereinafter Beshai) U.S. Patent No. 6,721,271, Phil Edholm., (hereinafter Edholm) U.S. Patent No. 6,600,721 in view of Mauger et al., (hereinafter Mauger) U.S. Patent No. 6,917,586.

26. As to claim 44, Beshai discloses the invention substantially as claimed, Beshai teach

including a system comprising: a host fabric adapter; and an RDMA (remote direct

memory access) manager included in a software stack of the host fabric adapter, the

RDMA manager operable to service one or more RDMA requests (see fig.16), and to:

determine if an amount of data located in a first memory buffer exceeds a maximum

transfer capacity [see col.12, lines 26-40 (the number segments in the buffer equal or

exceeds the parcel size)]of a system in which the data is to be transferred (see col.12,

lines 27-40), and; if it is determined that the amount of data located in the first memory

buffer does not exceed the maximum transfer capacity, then associate the data with a first

transfer operation (see col.14, line 65 to col.15, line 28.): and if the amount of data

associated with the first transfer operation has not reached the maximum transfer

capacity, associate data located in one or more portions of one or more other memory

buffers of the plurality of memory buffers with the first transfer operation (see col.18,

lines 9-35, and col.13, lines 9-17). But Beshai does not explicitly teach fabric adapter.

However, Mauger teaches fabric adapter (fig.3)(see 8, line 58 to col.9, line 35). It would

have been obvious to one of ordinary skill in the art at the time of the invention was made

to implement the teachings of Mauger into the computer system of Beshai to have fabric

adapter because it would have an efficient system that can provide specific functions that

enable any-server-to-any-storage device connectivity through the use of Fibre Channel

switching technology. However, Beshai does not explicitly teach data is to be transferred

in a single transfer operation to a remote memory buffer.

27. In the same field of endeavor, Edholm discloses (e.g., end node pacing for QOS and

bandwidth management). Edholm discloses data is to be transferred in a single transfer

operation to a remote memory buffer [see Edholm col.4, lines 4-15 (transfer the packet to

a memory buffer)].

28. Accordingly, It would have been obvious to one of ordinary skill in the networking art at

the time of the invention was made to have incorporated Edholm's teaching of end node

pacing for QOS and bandwidth management with the teaching of Beshai for the purpose

of provide to increase the complexity and expense of the network system [see Edholm

col.1, lines 45-50]. Thus, Beshai provides the motivation by stating providing for transfer

to be simpler, and therefore faster and easier to scale up [see Beshai, col.4, lines 39-40].

29. Claim 45 has similar limitations as claim 41; therefore, it is rejected under the same

rationale.

30. Claim 46 has similar limitations as claim 42; therefore, it is rejected under the same

rationale.

31. Claim 47 has similar limitations as claim 43; therefore, it is rejected under the same

rationale.

Response to Arguments

32. Applicant's arguments filled on May 22, 2006 have been fully considered, however they

are not persuasive because of the following reasons:

33. Applicants argue that Beshai does not teach if an amount of data located in a first

memory buffer does not exceed a maximum transfer capacity of a system which the data

is to be transfer operation to a remote memory buffer. In response to Applicant's

argument, the Patent Examiner maintain the rejection because Beshai does teach if an

amount of data located in a first memory buffer does not exceed a maximum transfer

capacity as shown in col.12, lines 26-40 (the number segments in the buffer equal or

exceeds the parcel size. Beshai clearly teach the application claimed invention.

Conclusion

34. Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

35. Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Tammy T. Nguyen whose telephone number is 571-272-3929.

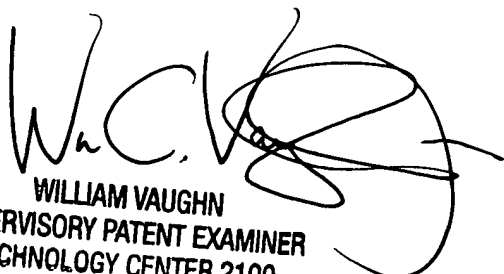The examiner can normally be reached on Monday - Friday 8:30 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, *William Vaughn* can be reached on 571-272-3922. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status information for

unpublished applications is available through Private PAIR only. For more information about

the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the

Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

If you would like assistance from a USPTO Customer Service Representative or access to the

automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TTN
August 16. 2006

WILLIAM VAUGHN
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